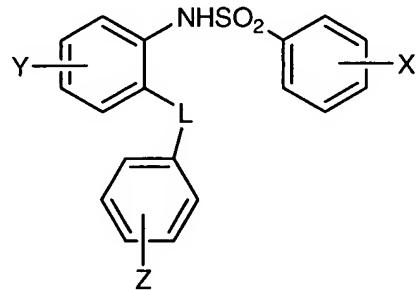


Amendments to the Claims

Please amend the claims as follows (the changes in these claims are shown with ~~strikethrough~~ for deleted text and underlines for added text). A complete listing of the claims is listed below with proper claim identifiers. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A modulator of the formula (I) or a salt thereof:



where

L is $-C(O)-$, $-S-$, $-S(O)-$ or $-S(O)_2-$;

X represents from 1 to 4 substituents independently selected from the group consisting of halogen, $-CN$, $-OH$, $-OR^1$, $-C(O)R^1$, $-CO_2R^1$, $-O(CO)R^1$, $-C(O)NR^1R^2$, $-OC(O)NR^1R^2$, $-SR^1$, $-SOR^1$, $-SO_2R^1$, $-SO_2NR^1R^2$, $-NR^1R^2$, $-NR^1C(O)R^2$, $-NR^1C(O)_2R^2$, $-NR^1SO_2R^2$, $-NR^1(CO)NR^1R^2$, unsubstituted C_{2-8} alkyl, substituted C_{1-8} alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocycl;

R^1 , R^2 and R^3 are each independently selected from the group consisting of hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or

substituted C₂₋₆ alkenyl, unsubstituted or substituted C₂₋₆ alkynyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, unsubstituted or substituted aryl-C₁₋₄ alkyl, unsubstituted or substituted aryl-C₁₋₄ alkyl, and unsubstituted or substituted aryloxy-C₁₋₄ alkyl; or

two of R¹, R² and R³ together with the atom(s) to which they are attached, may form an unsubstituted or substituted 5-, 6- or 7-membered ring;

Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, ~~-SR⁴, -SOR⁴, -SO₂R⁴~~, ~~-OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴~~, and unsubstituted or substituted C₁₋₄ C₁₋₄ alkyl;

R⁴ is selected from the group consisting of hydrogen, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, and unsubstituted or substituted C₂₋₆ alkynyl;

Z represents 0 to 5 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted heteroaryl and unsubstituted or substituted heterocycl; and

R⁷, R⁸ and R⁹ are each independently hydrogen, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, unsubstituted or substituted C₂₋₆ alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl-C₁₋₄ alkyl, and unsubstituted or substituted aryloxy-C₁₋₄ alkyl; or where any two of R⁷,

R^8 and R^9 together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring
with the proviso that when L is $-C(O)-$, X is 4-halogen, and Z is
hydrogen, Y is other than hydrogen, 4-chloro, or 4-methyl.

2. (Original) The modulator of claim 1, where L is $-CO-$.
3. (Original) The modulator of claim 2, where X represents from 1 to 3 substituents independently selected from the group consisting of halogen, $-CN$, $-OH$, $-OR^1$, $-C(O)R^1$, $-CO_2R^1$, $-O(CO)R^1$, $-OC(O)NR^1R^2$, $-SR^1$, $-SOR^1$, $-SO_2R^1$, $-NR^1R^2$, $-NR^1C(O)R^2$, $-NR^1C(O)_2R^2$, $-NR^1(CO)NR^1R^2$, unsubstituted C_{2-8} alkyl, substituted C_{1-8} alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- or 6-membered heteroaryl, or unsubstituted or substituted 3- to 7-membered heterocyclyl.
4. (Original) The modulator of claim 2, where at least one X substituent is situated *para* to the sulfonamido bond as defined in formula (I).
5. (Original) The modulator of claim 2, where at least one X substituent is situated *meta* to the sulfonamido bond as defined in formula (I).
6. (Original) The modulator of claim 2, where at least one X substituent is situated *ortho* to the sulfonamido bond as defined in formula (I).
7. (Original) The modulator of claim 2, where at least one X is unsubstituted C_{2-8} alkyl, unsubstituted C_{3-8} cycloalkyl, unsubstituted C_{2-8} alkenyl, or unsubstituted C_{2-8} alkynyl.
8. (Original) The modulator of claim 2, where at least one X is substituted C_{1-8} alkyl, substituted C_{3-8} cycloalkyl, substituted C_{2-8} alkenyl, or substituted C_{2-8} alkynyl, each having from 1 to 5 substituents independently selected from the group consisting of halogen, $-OH$, $-CN$, $-NO_2$, $-O$, $-OC(O)R^1$, $-OR^1$, $-C(O)R^1$, $-CONR^1R^2$, $-OC(O)NR^1R^2$, $-NR^2C(O)R^1$, $-NR^1C(O)NR^2R^3$, $-CO_2R^1$, $-NR^1R^2$, $-NR^2CO_2R^1$, $-SR^1$, $-SOR^1$, $-SO_2R^1$, $-SO_2NR^1R^2$, $-NR^1SO_2R^2$, unsubstituted or substituted 6- to 10-membered

aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl.

9. (Original) The modulator of claim 8, where at least one X is substituted C₁₋₈ alkyl, having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -CN, =O, -OC(O)R¹, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -CO₂R¹, -NR¹R², -SO₂R¹, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl.

10. (Original) The modulator of claim 2, where at least one X is unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, or unsubstituted or substituted 3- to 10-membered heterocyclyl, where when X is substituted it has from 1 to 4 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, -CN, -NO₂, -OH, -OR¹, =O, -OC(O)R¹, -CO₂R¹, -C(O)R¹, -CONR¹R², -OC(O)NR¹R², -NR²C(O)R¹, -NR¹C(O)NR²R³, -NR¹R², -NR²CO₂R¹, -SR¹, -SOR¹, -SO₂R¹, -SO₂NR¹R², and -NR¹SO₂R².

11. (Original) The modulator of claim 10, where at least one X is unsubstituted or substituted phenyl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -NR¹R², -SO₂R¹, and unsubstituted or substituted C₁₋₈ alkyl.

12. (Original) The modulator of claim 10, where at least one X is unsubstituted or substituted 3- to 7-membered hetetocyclyl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of C₁₋₈ alkyl, -OR¹, -OH, -OC(O)R¹, -CO₂R¹, -C(O)R¹, -CONR¹R², -NR¹R², -SO₂R¹, and -NR¹SO₂R².

13. (Currently Amended) The modulator of claim 10, where at least one X is unsubstituted or substituted 5- or 6-membered heteroaryl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -NR¹R², -SO₂R¹, and unsubstituted or substituted C₁₋₈ alkyl.

14. (Original) The modulator of claim 2, where R¹, R² and R³, when substituted, can have from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -OCOHN'R', -OCONR'₂, -SH, -SR', -SO₂NH₂, -CONH₂, -NHC(O)NH₂, NR'C(O)NH₂, -CO₂H, -CN, -NO₂, -NH₂, -NHR' and -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONR'₂, -CONHR', -C(O)R', -NR'COR', -NHCOR', -NR'CO₂R', -NHCO₂R', -CO₂R', -NR'C(O)NR'₂, -NHC(O)NR'₂, -NR'C(O)NHR', -NHC(O)NHR', -NR'SO₂R', -NHSO₂R', -SO₂NR'₂, and -SO₂NHR', where R' is C₁₋₆ alkyl.

15. (Original) The modulator of claim 2, where Y represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -OR⁴, -C(O)R⁴, -SR⁴, -CF₃, -SOR⁴, and -SO₂R⁴.

16. (Original) The modulator of claim 15, where Y represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -CF₃, and -SO₂R⁴.

17. (Original) The modulator of claim 15, where at least one Y represents halogen.

18. (Original) The modulator of claim 2, where Y represents from 1 to 2 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and unsubstituted or substituted C₁₋₄ alkyl.

19. (Original) The modulator of claim 18, where one Y represents a halogen and another substituent selected from the group consisting of halogen, -CN, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴ and unsubstituted or substituted C₁₋₄ alkyl.

20. (Original) The modulator of claim 18, where at least one Y substituent is located *para* to the sulfonamide bond as defined in formula (I) and another Y substituent is halogen.

21. (Original) The modulator of claim 15, where at least one Y is unsubstituted C₁₋₄ alkyl.

22. (Original) The modulator of claim 15, where at least one Y is substituted C₁₋₄ alkyl, having from 1 to 3 substituents independently selected

from the group consisting of halogen, -OH, -OR⁴, -CN, -NO₂, =O, -OC(O)R⁴, -CO₂R⁴, -C(O)R⁴, -CONR⁴R⁵, -OC(O)NR⁴R⁵, -NR⁴C(O)R⁵, -NR⁴C(O)NR⁵R⁶, -NR⁴R⁵, -NR⁴CO₂R⁵, -SR⁴, -SOR⁴, -SO₂R⁴, -SO₂NR⁴R⁵, and -NR⁴SO₂R⁵,

where R⁴, R⁵ and R⁶ are each independently selected from the group consisting of hydrogen, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₁₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, and unsubstituted or substituted C₂₋₆ alkynyl; or where any two of R⁴, R⁵ and R⁶ together with the atom(s) to which they are attached, may form a 5-, 6- or 7-membered ring.

23. (Original) The modulator of claim 22, where at least one Y is substituted C₁₋₄ alkyl, having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR⁴, -CN, -NO₂, =O, -OC(O)R⁴, -CO₂R⁴, -C(O)R⁴, -CONR⁴R⁵, -NR⁴C(O)R⁵, -NR⁴R⁵, -NR⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and -NR⁴SO₂R⁵.

24. (Original) The modulator of claim 23, where R⁴, R⁵ and R⁶, when substituted, can have from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -SH, -SR', -SO₂NH₂, -CONH₂, -NHC(O)NH₂, N(C₁₋₆alkyl)C(O)NH₂, -CO₂H, -CN, -NO₂, -NH₂, -NHR', -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONHR', -CONR'₂, and -C(O)R', where R' is C₁₋₆alkyl.

25. (Original) The modulator of claim 2, where Z represents 0 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 7-membered heterocyclyl.

26. (Original) The modulator of claim 2, where Z represents 0 to 2 substituents independently selected from the group consisting of halogen,

unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₁₋₆ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 3 to 7-membered heterocycyl, and unsubstituted or substituted 5-or 6-membered heteroaryl.

27. (Currently Amended) The modulator of claim 25, where at least one Z is unsubstituted C₁₋₈ alkyl, unsubstituted C₃₋₈ cycloalkyl, unsubstituted C₂₋₈ alkenyl, unsubstituted C₂₋₈ alkynyl or unsubstituted C₁₋₈ alkoxy, unsubstituted 6- to 10-membered aryl, unsubstituted 3- to 7-membered heterocycyl, and 3- to 7-membered heteroaryl.

28. (Currently Amended) The modulator of claim 25, where at least one Z is substituted C₁₋₈ alkyl, substituted C₃₋₈ cycloalkyl, substituted C₂₋₈ alkenyl, substituted C₂₋₈ alkynyl or substituted C₁₋₈ alkoxy, each having from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, -CN, -NO₂, =O, -CN, -NO₂, -OC(O)R⁷, -CO₂R⁷, -C(O)₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, [-]NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6- membered heteroaryl, or unsubstituted or substituted 3- to 6-membered heterocycyl.

29. (Currently Amended) The modulator of claim 25, where each R⁷, R⁸ and R⁹, when substituted, can have from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -OCONHR', -OCONR'₂, -SH, -SR', -CN, -SO₂NH₂, -CONH₂, -NHC(O)NH₂, -NR'C(O)NH₂, -CO₂H, -NO₂, -NH₂, -NHR', and -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONR'₂, -CONHR', -C(O)R', -NR'COR', -NHCOR', -NR'CO₂R', -NHCO₂R', -CO₂R', -NR'C(O)NR'₂, -NHC(O)NR'₂, -NR'C(O)NHR', -NHC(O)NHR', -NR'SO₂R', -NHSO₂R', -SO₂NR'₂, and -SO₂NHR', where R' is C₁₋₆alkyl.

30. (Original) The modulator of claim 3, where Y represents from 1 to 3 substituents, each independently selected from the group consisting of

halogen, -CN, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and unsubstituted or substituted C₁₋₄ alkyl.

31. (Original) The modulator of claim 30, where at least one Y is halogen.

32. (Original) The modulator of claim 25, where Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and unsubstituted or substituted C₁₋₄ alkyl.

33. (Original) The modulator of claim 32, where at least one Y is halogen.

34. (Original) The modulator of claim 15, where Z represents 0 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 7-membered heterocyclyl.

35. (Original) The modulator of claim 34, where X is unsubstituted C₂₋₈ alkyl or substituted C₁₋₈ alkyl.

36. (Original) The modulator of claim 34, where at least one Y is halogen.

37. (Original) The modulator of claim 30, where Z represents 0 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or

substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 7-membered heterocyclyl.

38. (Original) The modulator of claim 37, where X is unsubstituted C₂₋₈ alkyl or substituted C₁₋₈ alkyl.

39. (Original) The modulator of claim 37, where at least one Y is halogen.

40. (Original) The modulator of claim 1, which has activity in a chemotaxis assay of <10000 nM.

41. (Original) The modulator of claim 1, which has activity in a chemotaxis assay of <1000 nM.

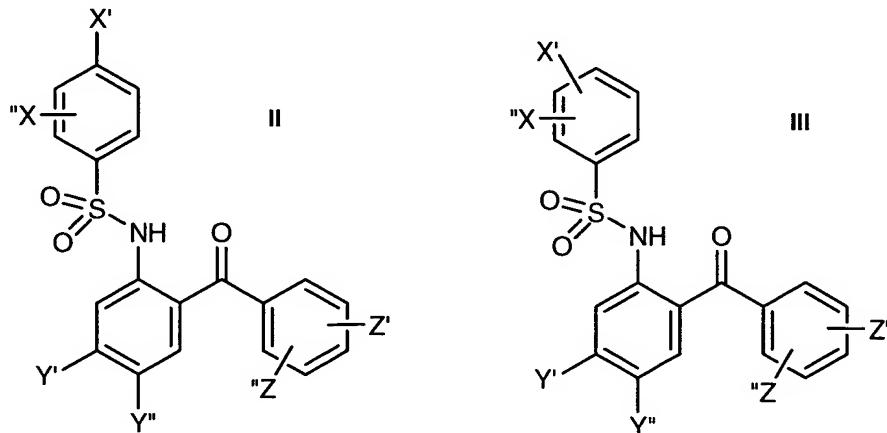
42. (Original) The modulator of claim 1, which has activity in a chemotaxis assay of <100 nM.

43. (Original) The modulator of claim 1, which has activity in a CCR9 chemotaxis assay of <10000 nM.

44. (Original) The modulator of claim 1, which has activity in a CCR9 chemotaxis assay of <1000 nM.

45. (Original) The modulator of claim 1, which has activity in a CCR9 chemotaxis assay of <100 nM.

46. (Original) A modulator of one of the formulae (II) or (III) or a salt thereof:



where X' and X'' are each independently selected from the group consisting of hydrogen, halogen, -CN, -OH, -OR¹, -C(O)R¹, -CO₂R¹, -O(CO)R¹, -C(O)NR¹R², -OC(O)NR¹R², -SR¹, -SOR¹, -SO₂R¹, -SO₂NR¹R²,

-NR¹R², -NR¹C(O)R², -NR¹C(O)₂R², -NR¹SO₂R², -NR¹(CO)NR²R³, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl, with the proviso that if one of X' and X" is hydrogen than the other is not hydrogen or unsubstituted methyl;

R¹, R₂ and R³ are each independently selected from the group consisting of hydrogen, C₁₋₆ alkyl, C₃₋₆ cycloalkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, 6- to 10-membered aryl, 5- to 10-membered heteroaryl, aryl-C₁₋₄ alkyl, aryl-C₁₋₄ alkyl, and aryloxy-C₁₋₄ alkyl; or two of R¹, R² and R³ together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring;

Y' and Y" are each independently selected from the group consisting of hydrogen, halogen, -CN, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴ and unsubstituted or substituted C₁₋₄ alkyl, with the proviso that Y' and Y" cannot both be hydrogen simultaneously;

R⁴ is selected from the group consisting of hydrogen, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, and unsubstituted or substituted C₂₋₆ alkynyl;

Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted C₂₋₈ alkynyl, unsubstituted or substituted C₁₋₈ alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- or 6-membered

heteroaryl and unsubstituted or substituted 3- to 7-membered heterocyclyl; and

where R⁷, R⁸ and R⁹ are each independently hydrogen, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted C₃₋₆ cycloalkyl, unsubstituted or substituted C₂₋₆ alkenyl, unsubstituted or substituted C₂₋₆ alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl-C₁₋₄ alkyl, and unsubstituted or substituted aryloxy-C₁₋₄ alkyl; or where any two of R⁷, R⁸ and R⁹ together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring.

47. (Original) The modulator of claim 46, where X' and X" are each independently selected from the group consisting of hydrogen, halogen, -CN, -OR¹, -C(O)R¹, -SO₂R¹, -NR¹R², unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, unsubstituted or substituted C₂₋₈ alkenyl, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 5- or 6-membered heterocyclyl, with the proviso that if one of X' and X" is hydrogen than the other is not hydrogen or unsubstituted methyl.

48. (Original) The modulator of claim 46, where X' and X" are each independently selected from the group consisting of hydrogen, halogen, -CN, -CF₃, -CH=CH₂, isoamyl, phenylacetylene, t-butyl, ethyl (Et), i-propyl (iPr), -C(CH₃)CH₂CH₃, hydroxybutyl, -C(CH₃)₂CH₂CH₂OH, -CH₂CH₂CO₂Me, -OCF₃, -OMe, -O-iPr, -C(O)Me, -SO₂Me, phenyl (Ph), -OEt, pyrazole, thiophene, aminopyridine, oxazole, and morpholinyl, with the proviso that X' and X" cannot both be hydrogen simultaneously.

49. The modulator of claim 46, where Y' and Y" are each independently hydrogen or halogen, with the proviso that one or both are halogen.

50. (Original) The modulator of claim 46, where Y' is hydrogen and Y" is chloro or bromo.

51. (Original) The modulator of claim 46, where at least one of Y' or Y" is a halogen atom and is *ortho* to the sulfonamide bond in formula (I).

52. (Original) The modulator of claim 46, where at least one of Y' or Y" is a halogen atom and is *meta* to the sulfonamide bond in formula (I).

53. (Original) The modulator of claim 46, where at least one of Y' or Y" is a halogen atom and is *para* to the sulfonamide bond in formula (I).

54. (Original) The modulator of claim 46, where Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, -SO₂NR⁷R⁸, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.

55. (Original) The modulator of claim 46, where Z' and Z" are each independently hydrogen, halogen, -CN, -OR⁷, -NR⁷R⁸, -SR⁷, -SOR⁷, and -SO₂R⁷, unsubstituted or substituted C₁₋₆ alkoxy, unsubstituted or substituted C₁₋₆ alkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted 5- or 6-membered heterocyclyl.

56. (Original) The modulator of claim 47, where Y' and Y" are each independently hydrogen or halogen, with the proviso that one or both are halogen.

57. (Original) The modulator of claim 47, where Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, -SO₂NR⁷R⁸, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.

58. (Original) The modulator of claim 49, where Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₁₋₈

cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted 6- to 10-membered aryl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.

59. (Original) The modulator of claim 56, where Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C₁₋₈ alkyl, unsubstituted or substituted C₃₋₈ cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, -SO₂NR⁷R⁸, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.

60. (Original) A composition comprising a pharmaceutically acceptable carrier and a compound of claim 2.

61. (Currently Amended - Withdrawn) A method for treating a CCR9-mediated condition or disease comprising administering to a subject a safe and effective amount of [T]the modulator of claim 2.

62. (Withdrawn) The method of claim 61, where the CCR9-mediated disease or condition is an inflammatory condition, an immunoregulatory disorder.

63. (Withdrawn) The method of claim 61, where the CCR9-mediated disease or condition is inflammatory bowel disease, an allergic disease, psoriasis, atopic dermatitis, asthma, fibrotic diseases, graft rejection, immune mediated food allergies, autoimmune diseases, Celiac disease, rheumatoid arthritis, thymoma, thymic carcinoma, leukemia, solid tumor, or acute lymphocytic leukemia.

64. (Withdrawn) The method of claim 61, further comprising administering an anti-inflammatory or analgesic agent.

65. (Withdrawn) The method of claim 61, where the administering is oral, parenteral, rectal, transdermal, sublingual, nasal or topical.

66. (Withdrawn) The method of claim 61, where the compound is administered in combination with an anti-inflammatory or analgesic agent.

67. (Withdrawn) A method of modulating CCR9 function in a cell, comprising contacting the cell with a CCR9 modulating amount of the modulator of claim 2.